

REMARKS:

Claims 1-14 are pending in the present application.

Applicant appreciates the Examiner's thorough examination of the application. In the Office Action dated September 19, 2005, the Examiner initially rejected all pending claims pursuant to 35 U.S.C. § 102 and/or 35 U.S.C. § 103 as being anticipated by or obvious in view of one or more of the following references: – U.S. Patent No. 5,402,535 issued to Green; U.S. Patent No. 6,792,623 issued to Luppi; U.S. Patent No. 5,283,914 issued to James; and French Patent No. 2,614,538 issued to Grizard et al. Before discussing these rejections of the claims of the present application, Applicant believes it to be beneficial to review the essential features and advantages of the present invention in order to place the discussion of the claims in proper context.

The present invention is a respirator hood that fits comfortably over the head of a wearer and provides for efficient delivery of air to the interior of the hood and into the breathing zone of the wearer. A hood made in accordance with the present invention is designed to fit over and around the head of a wearer and defines a front opening in which a transparent lens is received to protect the face of the wearer without obstructing vision. Air is provided through an inlet and is directed into a reservoir within the hood. From this reservoir, air is distributed to an inflatable neck cuff and one or more overhead channels that provide for efficient delivery of air to the interior of the hood and into the breathing zone of the wearer.

The neck cuff is positioned at the lower portion of the hood and substantially circumscribes the opening through which a wearer inserts his head into the hood. Incoming air inflates the neck cuff. Since there is no exit or outlet from the neck cuff, it remains inflated, thus

causing the neck cuff to exert maximum sealing pressure against the wearer's neck and also prevents the hood from rising up relative to the wearer's head due to the upward forces resulting from the introduction of air into the interior of the hood.

Air is also directed from the reservoir into one or more overhead channels that provide for efficient delivery of air to the interior of the hood and into the breathing zone of the wearer. By providing multiple overhead channels, as opposed to a single, unitary channel, movement of the hood due to the air flow from the rear of the hood to the front of the hood is minimized. Specifically, by providing multiple overhead channels, there is not a significant extension of the channels into the interior of the hood, increasing headroom and reducing the likelihood that movement of the hood would cause the lens to be pushed against the wearer's face.

In reviewing the cited prior art references, U.S. Patent No. 5,402,535 issued to Green describes and claims an inflatable neck guard that provides emergency head and cervical support in the event of a rapid acceleration or deceleration of the human body, such as in military aircraft. See column 1, lines 38-49. The Examiner has asserted that Green describes an inflatable neck cuff at the lower portion of the hood, a neck cuff that exerts a sealing pressure against the neck of the wearer and prevents the hood from rising up relative to the head of the wearer.¹ However, Applicant respectfully submits that Green does not describe or teach any "hood." Rather, the inflatable neck guard described by Green is a safety device that is separate and apart from the helmet worn by the pilot of the military aircraft.

¹ In rejecting claim 1 as anticipated pursuant to 35 U.S.C. § 102(b), the Examiner initially cites U.S. Patent No. 5,402,535 issued to Green, but then identifies the reference as "Luppi" in the remaining discussion. Because the figure numbers and reference numerals cited by the Examiner correspond to the Green reference, not the Luppi reference, Applicant believes the reference to Luppi was in error and is responding accordingly.

U.S. Patent No. 6,792,623 issued to Luppi describes a helmet for artificial respiration for patients with a medical condition that requires assisted breathing. This helmet does not include an inflatable neck cuff, but rather an inflatable "bag" with a lower portion that is gathered around the neck of a patient. See column 3, lines 21-24; and Figures 6-7. This bag essentially fills "dead space" within the helmet, "with a consequent better reactivity of the system which, in assisted ventilation, allows the ventilator to detect promptly the pressure drop at the beginning of inspiration...." See column 3, lines 25-28. In other words, this bag is designed to inflate to a size sufficient to reduce the space inside the artificial respirator. However, Luppi does not include any teaching or suggestion regarding the inflation of this bag to a size sufficient to exert a sealing pressure against the neck of the wearer. Furthermore, it should be recognized that this bag described by Luppi does nothing to prevent the helmet from rising up relative to the head of the wearer. Rather, "straps are provided to produce a firm coupling of the helmet to the patent, avoiding the unpleasant phenomenon of lifting during use." See column 1, lines 14-16.

U.S. Patent No. 5,283,914 issued to James describes a rigid, protective helmet for use in the mining or quarrying industries. See column 1, lines 42-45. This helmet includes air ducts defined by the shell of the rigid helmet that pass from the back to the front of the rigid helmet and supply "air to the top part of the visor when in its operational extended position in front of a wearer's face, such that the interior of the visor is swept with air... to provide a pneumatic seal therearound to minimise the ingress of injurious atmospheric pollutants." See column 1, lines 56-66.

Finally, French Patent No. 2,614,538 issued to Grizard et al. describes a respirator hood wherein air is delivered into the hood via outlet vents in a collar. See Figures 5-6.

Referring now to the claims of the present application, claim 1, the first independent claim, was initially rejected as anticipated by Green pursuant to 35 U.S.C. 102(b). However, for a §102 rejection to stand, a cited prior art reference must disclose each and every limitation found in a claim against which it is cited because "a claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." Verdgall Bros. V. Union Oil Co. of California, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987); M.P.E.P. §2131.

In this case, claim 1, as amended, recites a respirator hood with an inflatable neck cuff positioned near a lower portion of the hood. This inflatable neck cuff has no outlet into the interior of the hood such that, once inflated, "it exerts a sealing pressure against the neck of the wearer and prevents the hood from rising up relative to the head of the wearer." As mentioned above, Green does not describe or teach any "hood," but only an inflatable neck guard that is separate and apart from any headgear. Accordingly, Applicant respectfully submits that claim 1 is not anticipated by Green.

The Examiner has also rejected independent claim 1 (and claim 8) as obvious over Luppi in view of James. Of course, for such a rejection to stand, the cited prior art references "must teach or suggest all of the claims limitations." M.P.E.P. § 706.02(j) (emphasis added). However, Luppi and James, in combination, still fail to teach all of the limitations of the claims against which they were cited.

Again, Luppi describes a bag with a lower portion that is gathered around the neck of the wearer. Even if this bag could properly be characterized as an inflatable neck cuff, Luppi describes the bag as a means for filling space within a respirator helmet. Quite distinctly, the

inflatable neck cuff of claim 1 is designed to inflate to a size sufficient to exert a sealing pressure against the neck of the wearer. Luppi does not include any teaching or suggestion regarding the inflation of its bag to a size sufficient to exert a sealing pressure against the neck of the wearer. Rather, Luppi describes the use of a separate deformable sealing collar 11 that rests on the shoulders of the wearer. Similarly, Luppi does not include any teaching or suggestion regarding the use of an inflatable neck cuff to prevent the helmet from rising relative to the head of the wearer, as recited in claim 1. Indeed, Luppi implicitly concedes that its bag does not serve this purpose by describing the use of straps "to produce a firm coupling of the helmet to the patent, avoiding the unpleasant phenomenon of lifting during use." See column 1, lines 14-16.

With respect to the second cited reference in the obviousness rejection of claim 1, James teaches a rigid, protective helmet for use in the mining or quarrying industries, and was cited only for its teachings regarding air ducts with headgear. It also does not include any teaching or suggestion regarding the inflation of a neck cuff a size sufficient to exert a sealing pressure against the neck of the wearer, nor does it include any teaching or suggestion regarding the use of an inflatable neck cuff to prevent the helmet from rising relative to the head of the wearer. Therefore, even assuming that the Luppi and James references were properly combined, these references fail to teach each and every limitation of claim 1.²

² Because the combination of the cited references does not teach all limitations of the claimed invention, Applicant does not reach the issue of whether Examiner's combination of these references was proper. When combining prior art references, the Court of Appeals for the Federal Circuit has repeatedly warned that "[w]hen a rejection depends on a combination of prior art references, there must be some teaching, suggestion, or motivation to combine the references." In re Rouffet, 47 USPQ2d 1453, 1456 (Fed. Cir. 1998). See also In re Oetiker, 24 USPQ2d 1443, 1446 (Fed. Cir. 1992); Diversitech Corp. v. Century Steps, Inc., 850 F.2d 675, 678 79, 7 USPQ2d 1315, 1318 (Fed. Cir. 1988); In re Geiger, 815 F.2d 686, 687, 2 USPQ2d 1276, 1278 (Fed. Cir. 1987); and Interconnect Planning Corp. v. Feil, 774 F.2d 1132, 1147, 227

Applicant thus respectfully submits that claim 1 is in condition for allowance.

Furthermore, claims 2-7 depend from claim 1, and therefore, are also now believed to be in condition for allowance.

Claim 8 is similar to claim 1 in that it recites a respirator hood with an inflatable neck cuff positioned near a lower portion of the hood that provides a sealing pressure against the neck of the wearer and prevents the hood from rising up relative to the head of the wearer. As set forth above in the discussion of claim 1, Applicant respectfully submits that Luppi and James, in combination, fail to teach or suggest such a structure and function of an inflatable neck cuff.

Furthermore, claim 8 includes the limitation that the hood include "one or more overhead channels which define an air delivery path from the air source over the head of the wearer to the interior of the lens and downwardly across the face of the wearer." Although Applicant recognizes that James describes air ducts that pass from the back to the front of a rigid helmet, there is no suggestion to provide such air ducts into the helmet taught and described by Luppi. What would be the motivation for combining these references? Luppi already teaches the use of a bag to fill "dead space" within the helmet, and thus, defines a limited breathing zone. Accordingly, there is no need to direct air over the head of the wearer to a breathing zone in front of the face of the wearer. Furthermore, Applicant points out that the helmet described by Luppi is hermetically sealed with respect to the patient, so there would be no need of the "filtered air supply" described by James.

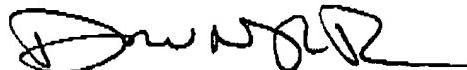
Therefore, Applicant respectfully submits that the combination of the Luppi and James

USPQ 543, 551 (Fed. Cir. 1985)). It should be noted that, other than Applicant's own application, the Examiner has not cited any teaching, suggestion, or motivation, to combine these references.

not only fails to teach all limitation of the invention recited in claim 8, but also submits that such a combination is improper, since a claimed invention can "not be obvious without a demonstration of the existence of a motivation to combine those references at the time of the invention." National Steel Car Ltd. v. Canadian Pacific Railway Ltd., 69 USPQ2d 1641, 1654-55 (Fed. Cir. 2004), citing Ecolochem, Inc. v. S. Cal. Edison Co., 227 F.3d 1361, 1371, 56 USPQ2d 1065 (Fed. Cir. 2000). Thus, claim 8 is also believed to be in condition for allowance. Furthermore, claims 9-13 depend from claim 8, and therefore, are also now believed to be in condition for allowance.

Finally, claim 14 has been added to the present application, a claim that is also believed to be allowable over the cited prior art references.

Respectfully submitted,



David W. Nagle, Jr., Reg. No. 42,923
William C. Ferrell, Jr., Reg. No. 56,535
STITES & HARBISON, PLLC
400 W. Market Street
Louisville, Kentucky 40202-3352
Phone (502) 587-3400
Facsimile (502) 587-6391